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Angioma of the Nose.

BY ✓

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OF THE STATE OF NEW YORK; OF THE MONROE
COUNTY MEDICAL SOCIETY; OF THE ROCHESTER
PATHOLOGICAL SOCIETY, ETC.

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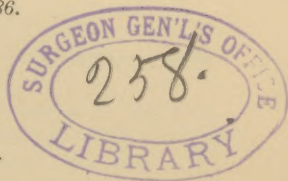
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ANGIOMA OF THE NOSE.*

ANGIOMATOUS growths in the nose, though more frequent than in the larynx, are of quite rare occurrence. By including in the list all growths in which the vascular element is the principal or predominating feature—such as erectile tumors or nævi, vascular tumors, angioma cavernosum, and the fibro-angiomata—I have been able to find records of but thirteen cases that have been reported.

Two by Dr. Clinton Wagner—one a vascular myxoma; the other combined in different portions of the tumor the structure of an angioma of the cavernous variety, a myxofibroma, and a myxoma, giving evidence of transition from one form to that of the other. (“Diseases of the Nose,” New York, 1884, p. 149, *et seq.*)†

* Read before the American Laryngological Association, June 25, 1885.

† Dr. Wagner (p. 149) also mentions “a case reported by Beauchêne, which is referred to by Virchow.” This case must have been included by mistake. Virchow (“Pathologie des tumeurs,” Paris, 1876, p. 44) does cite a case of angioma of the nose in which the tumor was extirpated by Beauchêne, not Beauchêre, the latter being evidently a typographical error, but gives no details as to its situation. Alibert (“Nosologie naturelle,” Paris, 1838, p. 335), who originally reported the case, and to whom Virchow refers, says: “M. de Beauchêne, chirurgien en chef de l’hôpital Saint-Antoine, en extirpa une qui était située *sur*

One by Dr. Delavan of a vascular myxoma. ("Archives of Laryngology," vol. iii, p. 174, 1882.)

One reported by Dr. Seiler of erectile tumor of the anterior nares. ("American Specialist," Philadelphia, 1881, vol. ii, p. 7.)

An erectile tumor of the pituitary membrane is also reported by Verneuil. ("Annales des maladies de l'oreille et du larynx," t. i, p. 169.) This case is referred to by Mackenzie. ("Diseases of the Throat and Nose," Lond., 1884, vol. ii, p. 384.)

Debris, in his "Thèse de Paris" ("Des polypes fibro-angiomateux de la région naso-pharyngienne," 1882), has collected the records of eight cases of fibro-angiomatous growths of the nose that have been observed in the Parisian hospitals.

One case has recently come under my own observation, the details of which are as follows :

C. L. W., sixty-eight years of age, a retired naval officer, living in Mexico, N. Y., was referred to me by his son-in-law, Dr. Johnson, of that place, January 15, 1885. Six weeks before, he began to perceive an obstruction in the left nostril, and was soon after unable to clear the nostril of mucus or to breathe through it.

The discharge from the nostril was very profuse, which caused him to ascribe his trouble to nasal catarrh. Two weeks after he first observed this obstruction he began to have, nearly every day, nose-bleed from this nostril, which was frequently very profuse. About three weeks before I saw him, Dr. Johnson observed in this nostril a growth, and, supposing it to be a mucous polyp, attempted to remove it with a pair of polyp-forceps. On tearing off a small portion, an alarming hæmor-

le nez d'une pauvre femme." The tumor is also described by Alibert as being of a complicated structure and becoming erected whenever the patient got angry. It was situated on the external portion of the nose, and not in the nasal cavity.

A TABULATED REPORT OF ALL THE CASES OF ANGIOMATOUS GROWTHS OF THE NOSE THAT THE WRITER HAS FOUND RECORDED IN MEDICAL LITERATURE, INCLUDING THE ONE REPORTED BY HIMSELF.

DATE.	OPERATOR—REFERENCE.	SEX.	AGE.	DURATION AND CHARACTER OF PREVIOUS SYMPTOMS.	SITUATION, APPEARANCE, AND EXTENT.	PATHOLOGICAL NATURE.	TREATMENT.	RESULT AND SUBSEQUENT HISTORY. REMARKS.
(1) Oct. 18, 1849.	Nélaton, "Thèse de Beauf," Paris, 1857.	Male.	21	One year. Affected hearing and respiration. Attacks of profuse epistaxis for two months. The last he lost one litre of blood just before coming to hospital.	Attached to inferior surface of body of sphenoid; size of pullet's egg; slightly pedunculated, and flattened from before backward; crowded palate downward and forward on to base of tongue.	On section, fibrous, pearly amorphous, and perforated by a multitude of small orifices — the openings of numerous vessels (angiomas).	Removal by Nélaton's method.	Two hours after, profuse hemorrhage, and two days later death from loss of blood.
(2) 1858.	"Thèse de Beauf," Paris.	Male.	16	Duration not stated. Bled profusely on the slightest touch.	Enormous naso-pharyngeal polyp.	Excessively vascular (angiomatous).	M. Nélaton and Paul Dubois were unable to remove it.	No further report of case given.
(3) Feb. 4, 1860.	Hugnier; report of the Société de chirurgie. Debris, "Thèse de Paris," 1882.	Male.	16	Two and a half years. Left nostril obstructed; palate pushed downward; no pain, but general discomfort.	Attached to left side of vomer; size of a nutmeg, and pedunculated.	Cellulo-vascular, with rich in vessels (angiomas).	A button-hole was made in palate, a pair of scissors introduced, and pedicle cut off.	Hemorrhage very slight. Patient recovered.
(4) Sept. 15, 1872.	Panas; communicated by H. Grégnat to the Société anatomique, Oct., 1872.	Male.	15	Eight months. Left nasal fossa obliterated; distension and tumefaction of the left side of the face; exophthalmos; sight destroyed in left eye by pressure; double stethoscope heard above inferior border of orbit; frequent and profuse hemorrhages from nose.	Left nasal fossa completely filled by the growth, which projected against orbit and into skull. It also perforated hard palate, and projected through the opening.	Cavernous angioma.	Operation; resection of superior maxilla, removal of the portion projecting through the perforation in hard palate, then attempted the removal of the portion behind the orbit, which seemed to penetrate it, and to be the seat of the bruit.	Fatal hemorrhage occurred, and patient died almost immediately. Autopsy.—The orbital portion penetrated the skull and was covered only by the dura mater; the arterial dilata-tions communicated largely with the dilated cavernous sinuses of which it formed the anterior wall. This accounted for the souffle and fatal hemorrhage.
(5) Jan. 25, 1873.	Guyon; communicated to the Société de chirurgie.	Male.	Not given (Young man).	Not stated. Profuse nasal hemorrhages.	Behind palate and extended into the nasal fossa; pharyngeal portion size of a pullet's egg, and bled freely on exploration.	Diagnosis, angioma.	By electrolysis.	Frequently repeated attacks of ten minutes each produced sensible diminution of tumor and complete arrest of the hemorrhage.
(6) June 18, 1873.	Deménil; communicated to the Société de chirurgie.	Male.	13	Not stated. Frequent and profuse hemorrhages, arrested by ligation of left external carotid.	Attached to left basilar apophysis; extends into post. nares and zygomatic fossa, causing swelling above zygomatic arch the size of an almond.	Angiomas polyp.	Extirpated with curette.	Hemorrhage profuse—arrested by actual cautery. Left l'Hôtel-Dieu de Rouen Oct. 4, 1882, cured.
(7) 1875.	Vernieuil, "Ann. des maladies de l'oreille," etc. t. i, p. 390, et seq.; also referred to by Mackenzie, "Dis. of the Throat and Nose," Lond., 1884, vol. ii, p. 884.	Male.	52	Frequent and abundant hemorrhages from nose since boyhood. Anemic and much reduced.	On left side of septum, a dark-red swelling, round and sessile, the size of a cherry-stone. On second examination, the same condition was found, only in right side.	Erectile tumor.	Both sides of nose were laid open, and septum destroyed by actual cautery. Hemorrhage recurred from right side, and the cautery was reapplied.	Recovery. Two years after the operation the patient was well; four years later he died in a state of extreme cachexia.
(8) 1876.	Clinton Wagner, "Diseases of the Nose," N. Y., 1881, p. 140.	Male.	39	Five years. Profuse acrid discharge from nose, and closure of right nostril.	Attached to cartilaginous septum, and to a slight extent to vomer on right side. Sessile, bright-red color, soft and yielding to touch.	Angioma.	Tumor removed with knife, using left index-finger as a guide.	But little blood lost at operation. A few minutes later frightful hemorrhage occurred, causing syncope; arrested by tampon and Monsell's solution of iron. Patient cured; no return of growth after eight years.
(9) Jan. 12, 1881.	Bichet; communicated to Debris by Bazy, "Thèse de Paris," etc.	Male.	18	Three years. Occlusion of left nostril, and profuse mucous discharge; slight oozing of blood.	Sessile tumor in post. nares attached to superior portion of nose. Felt by finger in post. nares; not to be seen in anterior nares.	Angioma.	Removal by curette through an opening made in side of nose.	Profuse hemorrhage followed, and in three minutes 400 to 600 grammes of blood were lost. Nose tamponed. The second day after tampon removed, hemorrhage as profuse as before; another tampon applied. Ten days later, tampon again removed, and hemorrhage as profuse as two preceding. Hemorrhage arrested by cauterizing base. On separation of eschar, hemorrhages recurred, and patient succumbed. An examination showed that tumor communicated with cavernous sinus.
(10) 1881.	Seller, "American Specialist," Phila., vol. ii, p. 7.	Male.	20	Occlusion of nostril, together with an anterior inferior turbinate hypertrophied.	On lower portion of cartilaginous septum, about size of a cherry, and slightly constricted at base.	Angioma, or cavernous fibroma.	It was transfused with a needle, and removed with Jarvis's snare.	Hemorrhage slight. No return of the growth afterward.
(11) Aug. 20, 1881.	Clinton Wagner, "Diseases of the Nose," N. Y., 1884, p. 150.	Female.	23	Four weeks. Frequent and severe hemorrhages from left nostril; nose obstructed.	Attached to left middle turbinate bone; one inch in diameter in diameter; size of an English walnut; end of nose distended to twice its size, and septum crowded to the right; tumor dark-red color, and pulsating.	It combined, in different portions, a myxomatous, myxo-fibroma, and an angioma of cavernous variety.	Tumor removed with the snare.	Profuse hemorrhage followed, requiring the tampon; no further hemorrhage; patient cured.
(12) 1882.	Delavan, "Arch. of Laryngology," v. iii, p. 114.	Female.	30	Epistaxis since childhood; for four years more frequent and profuse, and from anterior portion of left nostril; for two years bright red tumor seen in left nostril; congested and sensitive.	In left nostril, at junction of septum with ala, $\frac{3}{4}$ in. from meatus. Diameter of base $\frac{3}{4}$ in.; elevation of thickness, $\frac{3}{4}$ in. Surface nodulated; bled profusely on slightest touch.	Vascular myxoma.	Removed by a small cup-shaped curette; hemorrhage, four oz., arrested by application of chromic acid.	No return of tumor, but abrasion of septum refused to heal, and continued to bleed on the slightest touch.
(13) 1882.	Richert; communicated to Debris by Bazy, "Thèse de Paris," etc.	Male.	17	Two years. Occlusion of left nostril and moderate epistaxis; for six months exophthalmia, left side, and swelling in temporal fossae.	Large tumor attached to vault of left nasal fossa and to basilar apophysis. A portion through left nostril, another penetrated the pterygo-maxillary fissure, and extended up under the zygomatic arch and formed a tumor in the temporal fossa.	Angioma. Numerous large and small vessels communicating with each other; fundamental fibrous tissue interspersed; no elastic fibers, but embryonic and fusiform cells.	Attempted to remove tumor with forceps.	Profuse hemorrhage followed; nose tamponed; exploration of tumor with finger through posterior nares caused profuse hemorrhage, requiring a tampon; repeated hemorrhages followed, and patient died twelve days afterward of blood poisoning, with typhoid symptoms.
(14) Jan. 19, 1885.	Roch, <i>vide</i> report above.	Male.	68	Six weeks. Profuse catarrhal discharge from nose; for four weeks profuse epistaxis nearly every day from left nostril.	The tumor was attached to the upper half of septum, the vault of nostril and to upper and side of middle turbinate bones; it filled the left nostril, from posterior nasal opening forward, and projected slightly beyond anterior nasal opening. It distended the nostril, was of a bluish-red appearance, pulsated under the finger, and bled profusely on the touch.	Angioma, which, as it continued to grow, was transformed into an endothelioma, and into an angioma sarcoma myxomatodes.	Attempted its removal by galvanocautery wire, which caused profuse hemorrhage; it was then removed in portions by Jarvis's snare, without hemorrhage, by cutting it off very slowly. Base cauterized by galvanocautery electrode; same operation repeated on the return of the growth.	After thorough removal and destruction of base, the tumor soon began to grow again, and in seven weeks had returned sufficiently to require removal, as before, though this time it was confined to septum. The second growth indicated a tendency to malignancy, which will undoubtedly cause a fatal termination. (See note in report of case.)

rhage immediately occurred. The doctor at once tamponed the nostril, but did not accomplish it before quite a large amount of blood had been lost. This greatly reduced the old gentleman's strength, and when I saw him he was very weak and much debilitated.

On examination, the left ala of the nose was seen to be somewhat distended by a growth which projected just beyond the orifice of the nostril. It was quite firm to the touch, and had a bluish-red appearance. So much did it resemble a fibroid growth that I at first thought it to be of that nature; but afterward, on examining it more carefully preparatory to its removal, I discovered its real nature. Even the slightest manipulation of the tumor would cause it to bleed very freely. Firm and steady pressure would reduce it somewhat in size, and at the same time quite strong pulsation could be felt under the finger. A silver probe, passed into and allowed to depend from the nostril with its inner end tilted up against the lower side of the tumor, would vibrate very markedly and synchronously with the contractions of the heart. There was no pain, but a sensation of pressure was experienced in that side of the face, with congestion of the eye and stillicidium.

The tumor was sufficiently large to fill the nostril from the anterior to the posterior nasal openings, and to crowd the posterior end of the septum to the right, although that deflection might have existed before.

By very careful exploration with a flexible slender probe, wound at the end with a little cotton to avoid causing hæmorrhage, I found the growth was attached to the upper half of the septum, the vault of the nostril, the upper turbinated bone, and the upper side of the middle turbinated bone.

January 19th I removed a large portion of the tumor. To avoid dangerous hæmorrhage, I employed the galvano-cautery. After passing the loop of platinum wire into the nostril, I separated the two sides with two small cannulæ that were slipped down over the wire, in order to carry the wire around as large a portion of the tumor as its very broad base would permit. After having done so, and drawn the wire down quite snugly and connected it with the cautery electrode-handle, I turned on

the current and very slowly cut off a portion of the growth. Contrary to my expectations, copious hæmorrhage followed that necessitated the immediate plugging of both the posterior and anterior nares. After removing the tampon, two days later, I attempted to cut the remainder of the tumor away at its base with the galvano-cautery knife. This also caused bleeding as soon as the electrode came sufficiently in contact with the tumor to burn through the enveloping mucous membrane, regardless of the degree to which the knife was heated, whether to a black, red, or white heat.

I then decided to try Jarvis's snare or cold-wire *écraseur*. This plan was eminently successful, and all further hæmorrhage was avoided. After encircling with the snare as large a portion of the tumor as was possible, I placed the patient in a reclining chair and cut the tumor off very slowly, occupying in the performance about three hours. Whenever tightening the wire (which I taught the patient to do himself) caused bleeding, further turning of the nut was stopped until all indications of bleeding had ceased.

Owing to the extensive attachment of the growth, and being unable to remove but a small portion at each operation, much time was consumed. Much additional time was also required for the reason that often four and five days would elapse between the removal of different portions, on account of the extreme weakness and enfeebled condition of the patient.

After the removal of the growth was completed I cauterized the base with the galvano-cautery electrode, which could now be used without causing hæmorrhage. The employment of cocaine rendered the operations with the snare, and also the cauterization, almost entirely painless.

After the tumor was removed, its texture was very soft and friable. The hard, firm feel and appearance which the tumor had before removal were due to the pressure exerted on it by reason of being crowded so firmly in between the resisting walls of the nasal passage.

A microscopic examination of the growth showed it to be composed of small blood-vessels, mainly enlarged and greatly dilated capillaries--at some places enlarged into small sinuses

—held together by a reticulum of connective tissue, the characteristics of true angioma.

About seven weeks afterward, by my advice, he returned for examination. He had had no trouble in the nose, but I found that there was a recurrence of the growth on the upper posterior portion of the septum. It was sessile, and at its base about 20 mm. in diameter.

This I removed with the snare. In order to do so, owing to its flattened condition, I was obliged to use the transfixion needle. After the removal of the tumor I cauterized its base with the galvano-cautery. It was very noticeable that this latter growth showed much less tendency to bleed than its predecessor.

Upon microscopic examination of this latter growth, it was found to consist of several different forms of tissue. First, a network with meshes that communicated with one another and were filled with blood. The trabeculæ were lined with endothelium and consisted of connective tissue. Second, in other places these spaces were filled with mucoid tissue or polyhedral cells resembling epithelial cells. Some of these spaces were only partly filled with these cells, and some were empty.

The pathological character of this growth is of interest, and illustrates the transformation which angiomatous tumors often undergo during the process of their development and growth.

As we have seen, the portion of the tumor that grew first was composed entirely of dilated and greatly developed capillary vessels, held together by a reticulum of connective tissue constituting true angioma of the hypertrophic form, according to Ziegler. As the tumor continued to grow, it was found to contain, in addition to the dilated capillary vessels, cavernous sinuses of different sizes resembling greatly the corpus spongiosum of the genital organs, thus constituting erectile tissue. The walls of these cavities were lined with epithelium. Subsequently we find the growth developing into an epithelial formation, the blood-spaces being filled

in with epithelial cells, constituting what is termed by Ziegler an endothelioma.

In other portions these blood-spaces were filled in with elements of a round-cell sarcoma, constituting what is termed angio-sarcoma myxomatodes.

In sections of some portions where some of the first tumor had evidently escaped removal, we have all these conditions combined in the same section, the one merging gradually into that of the other.

From the transition which this tumor is undergoing from that of a benign to that of a malignant character, as manifested by the microscopic examination and in its speedy return and rapid growth after removal, there is little doubt of its ultimate unfavorable termination.

NOTE.—Mr. W. died, from exhaustion, November 5, 1885. The tumor slowly grew again after its removal, and at the time of his death filled the nostril. An examination of this growth showed it to be an angio-sarcoma, the blood-spaces being almost filled with the elements of a round-cell sarcoma. It had been also noticed, for about two months before the patient died, that the tendency to hæmorrhage had disappeared—the symptom that was most annoying and alarming during the early history of the growth.

Angiomatous growths may also undergo fatty, fibrous, cystic, and carcinomatous degeneration. A very excellent review of the transformations of the angiomata in general is given by Duchemin,* and a very excellent contribution to the anatomy of angiomata is given by Monod.†

* "Contribution à l'étude des transformations des angiomes." Thèse de Paris, No. 49, 1880. Par Paul Duchemin.

† "Contribution à l'étude anatomique des angiomes." Par le Dr. Charles Monod. "Bulletins de la société anatomique de Paris," 1873, t. xlviii, p. 531, *et seq.*

DISCUSSION.

Dr. MACKENZIE thought that certain cases of angiomatous nasal growths might be referred to the category of hypertrophic enlargement of the turbinated bodies. Closely allied to the angiomatous condition, Dr. Mackenzie described a peculiar condition of hypertrophy or enlargement of the turbinated bodies associated with prolapse of these structures, forming a dense, dark reddish, hard, fleshy mass or tumor, which may hang free in the nostril or may rest on the floor of the inferior meatus. This condition, which has not been described by specialists, may possibly constitute, in some cases, the initial stage of the future angioma. Dr. Mackenzie related such a case, in which the prolapsed and hypertrophied cavernous body was removed by him with the galvano-cautery.

Dr. ROE: Angiomatous growths of the cavernous variety do resemble the cavernous tissue covering the inferior turbinated bones, and the lower posterior portion of the septum, and we should quite naturally expect to find that in many cases the growths originated in this tissue. On an examination of the fourteen cases that have thus far been reported, we do not find one in which the growth is described as arising from the inferior turbinated bone, the situation where this cavernous tissue is most abundant. Two were attached to the cartilaginous septum, while in the remainder of the cases in which the location was designated the growth was attached to the upper part of the nostril—to the vomer or the basilar apophysis, to the inferior surface of the body of the sphenoid, and to the vault of the nostril. In but two cases were the middle turbinated bones involved. It is also singular to note that in but one instance has the growth been located in the right nostril, and that in no instance have angiomatous tumors been reported as growing from both nostrils at the same time or alternately. In this case of my own the portion of the growth that contained the most cavernous tissue was located along the upper portion of the septum, where there is normally an entire absence of this tissue.

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